

CLAIMS

1. A metal-coated abrasive comprising a metal and plural abrasive grains bonded by the metal.
2. The metal-coated abrasive according to claim 1, wherein the abrasive grains are coated with a metal layer.
3. The metal-coated abrasive according to claim 2, wherein the metal layer, with which the abrasive grains are coated, is formed of plural layers.
4. The metal-coated abrasive according to claim 2 or 3, wherein the metal layer, with which the abrasive grains are coated, contains at least one metal selected from the group consisting of nickel, nickel-phosphorus, cobalt, cobalt-phosphorus, titanium, copper, chromium, iron, zirconium, niobium, molybdenum, and tantalum.
5. The metal-coated abrasive according to claim 4, wherein the metal layer, with which the abrasive grains are coated, contains nickel or nickel-phosphorus.
6. The metal-coated abrasive according to claim 4, wherein the metal layer other than an outermost metal layer, with

which the abrasive grains are coated, contains cobalt or cobalt-phosphorus.

7. The metal-coated abrasive according to any one of claims 3 to 6, wherein the outermost metal layer of the metal layer, with which the abrasive grains are coated, is formed of either nickel or nickel-phosphorus.

8. The metal-coated abrasive according to claim 2, wherein the metal layer, with which the abrasive grains are coated, is formed of a single layer of nickel or nickel-phosphorus.

9. The metal-coated abrasive according to any one of claims 1 to 8, wherein the metal, by which the abrasive grains are bonded, contains at least one metal selected from the group consisting of nickel, nickel-phosphorus, cobalt and cobalt-phosphorus.

10. The metal-coated abrasive according to claim 9, wherein the metal, by which the abrasive grains are bonded, is nickel or nickel-phosphorus.

11. The metal-coated abrasive according to any one of claims 1 to 10, wherein the abrasive grains have an average grain size of 0.5 to 300 μm .

12. The metal-coated abrasive according to claim 11, wherein the abrasive grains have an average grain size of 1 to 150 μm .
13. The metal-coated abrasive according to any one of claims 1 to 12, wherein the abrasive grains comprise at least one selected from the group consisting of cubic boron nitride, diamond, alumina and silicon carbide.
14. The metal-coated abrasive according to claim 13, wherein the abrasive grains comprise one of cubic boron nitride, diamond, and a mixture thereof.
15. The metal-coated abrasive according to any one of claims 1 to 14, wherein average 2 to 100 abrasive grains are bonded by the metal.
16. The metal-coated abrasive according to claim 15, wherein average 2 to 50 abrasive grains are bonded by the metal.
17. A grinding wheel using a metal-coated abrasive containing 5% by weight or more of the metal-coated abrasive of any one of claims 1 to 16.
18. The grinding wheel according to claim 17, which is a

resinoid grinding wheel.

19. Coated abrasives using the metal-coated abrasive of any one of claims 1 to 16.

20. A method of producing the metal-coated abrasive of any one of claims 2 to 8, which comprises forming a metal layer, with which abrasive grains are coated, using an electroplating or electroless plating method.

21. A method of producing the metal-coated abrasive of any one of claims 1 to 16, which comprises bonding plural abrasive grains by a metal using an electroplating or electroless plating method.

22. A method of producing the metal-coated abrasive of any one of claims 2 to 16, which comprises dipping abrasive grains in an electroplating or electroless plating bath to form a metal layer on the surface of the abrasive grains while stirring, and bonding the abrasive grains coated with the metal layer while gently stirring.